Amendments to the Claims

The following is a listing of all the claims submitted in this application including the present status of each. Any claims canceled or withdrawn in this application are done so without prejudice or disclaimer of any subject matter. Applicants reserve the right to pursue any canceled or withdrawn claims in continuing or divisional applications. By this paper, claims 1, 2, 21, 22, 26, 40 and 41 have been amended.

Listing of Claims.

1(currently amended). ~~A~~ An *in vitro* method for suppressing the expression of a selected gene in a cell the method comprising ~~a step of~~ introducing into the cell a molecule comprising (1) a nucleic acid binding portion which binds to a site at or associated with the selected gene which site is present in a genome and (2) an expression repressor portion, wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analogue, and wherein the repressor portion comprises a polypeptide or peptidomimetic and wherein the nucleic acid binding portion is joined to the expression repressor portion, either directly or indirectly, by an intermediate linker or moiety.

2(currently amended). ~~A~~ An *in vitro* method for modulating the expression of a selected gene in a cell the method comprising ~~a step of~~ introducing into the cell a molecule comprising (1) a nucleic acid binding portion which binds to a site at or

associated with the selected gene which site is present in a genome and (2) a modifying portion, wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analogue, and wherein the modifying portion comprises a polypeptide or peptidomimetic which is capable of modulating covalent modification of nucleic acid or chromatin and is not an endonuclease and wherein the nucleic acid binding portion is joined to the expression repressor portion, either directly or indirectly, by an intermediate linker or moiety.

3(withdrawn). A method according to claim 1 or 2 wherein the repressor or modifying portion is a chromatin inactivation portion.

4(withdrawn). A method according to claim 1 or 2 wherein the repressor or modifying portion is all or a portion of a component of a DNA methylase complex or all or a portion of a polypeptide which binds to or facilitates the recruitment of a DNA methylase complex.

5(previously presented). A method according to claim 1 or 2 wherein the repressor or modifying portion is all or a portion of a component of a histone acetyltransferase or all or a portion of a polypeptide which binds to or facilitates the recruitment of a histone acetyltransferase complex.

6(previously presented). A method according to claim 1 or 2 wherein the polypeptide or peptidomimetic part of the molecule has a molecular mass of less than 11 kDa.

7(previously presented). A method according to claim 1 or 2 wherein the nucleic acid binding portion is a DNA binding portion.

8(previously presented). A method according to claim 1 or 2 wherein the nucleic acid binding portion is an RNA binding portion and the site present in a genome is a nascent RNA being transcribed from DNA.

9(previously presented). A method according to claim 1 or 2 wherein the oligonucleotide or oligonucleotide analog or mimetic is a triplex forming oligonucleotide (TFO).

10(previously presented). A method according to claim 1 or 2 wherein the oligonucleotide analog or mimetic is a peptide nucleic acid (PNA).

11(previously presented). A method according to claim 1 or 2 wherein the repressor or modifying portion facilitates histone deacetylation.

12(previously presented). A method according to claim 11 wherein the chromatin inactivation portion is all or a portion of a component of a histone deacetylation (HDAC) complex or all or a portion of a polypeptide which binds to or facilitates the recruitment of a HDAC complex.

13(previously presented). A method according to Claim 12 wherein the component of the HDAC complex or the polypeptide which binds to or facilitates the recruitment of a HDAC complex is selected from the group consisting of PLZF, N-CoR, SMRT, Sin3,

SAP18, SAP30, HDAC, NuRD, MAD1, MAD2, MAD3, MAD4, Rb or E7.

14(original). A method according to claim 13 wherein the chromatin inactivation portion is all or a N-CoR- or SMRT-binding part of PLZF.

15(original). A method according to claim 13 wherein the chromatin inactivation portion is all or an enzymatically active part of a HDAC.

16(original). A method according to claim 13 wherein the chromatin inactivation portion is all or a histone deacetylase complex-binding part of E7.

17(previously presented). A method according to claim 1 or 2 wherein the molecule further comprises a portion which facilitates cellular entry and/or nuclear localization.

18(previously presented). A method according to claim 17 wherein the portion which facilitates cellular entry and/or nuclear localisation is a small peptide of 7-16 amino acids.

19(previously presented). A method according to claim 1 or 2 wherein the nucleic acid binding portion and the repressor or modifying portion are fused.

20(previously presented). A method according to claim 1 or 2 wherein the cell is an eukaryotic cell.

21(currently amended). A method according to claim 1 or 2 wherein the cell is selected from the group consisting of an animal cell ~~that is contained within an animal~~ and a plant cell ~~that is contained within a plant~~.

22(currently amended). A method according to claim 1 or 2 wherein the expression of a selected gene in a human cell is suppressed.

23(previously presented). A method according to claim 1 or 2 wherein the expression of a plurality of selected genes is suppressed.

24(previously presented). A method according to claim 1 or 2 including the step of using said molecule in the manufacture of an agent for modulating the expression of ~~the~~ a selected gene in a cell.

25(previously presented). A method as in claim 24 wherein the agent is for suppressing the expression of the selected gene.

26(currently amended). A method according to claim 24 wherein the agent is a medicament for modulating or suppressing the expression of a selected gene in an animal cell ~~or patient~~ in need of such modulation or suppression.

27-30(canceled).

31(previously presented). A pharmaceutical composition comprising a molecule as defined in claim 1 or 2 and a pharmaceutically acceptable carrier.

32(previously presented). A composition according to claim 31 comprising means for promoting cellular uptake of the molecule.

33(previously presented). A host cell comprising a molecule as defined in wherein said host cell is selected from

the group consisting of a bacterial cell, an animal cell and a plant cell.

34-38(canceled).

39(withdrawn). A method for designing a molecule for suppressing expression of a selected gene in a cell, the method comprising the steps of:

(1) identifying a site at or associated with the selected gene;

(2) identifying or designing a nucleic acid binding portion which binds to, or is predicted to bind to, the site (or a polynucleotide having or comprising the nucleotide sequence of the site); and

(3) preparing a molecule comprising the nucleic acid binding portion and an expression repressor portion,

wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analogue, and wherein the repressor portion comprises a polypeptide or peptidomimetic.

40(currently amended). A method for designing a molecule for modulating expression of a selected gene in a cell *in vitro*, the method comprising ~~the steps of~~:

(1) identifying a site at or associated with the selected gene;

(2) identifying or designing a nucleic acid binding portion which binds to, or is predicted to bind to, the site (or a polynucleotide having or comprising the nucleotide sequence of the site); and

(3) preparing a molecule comprising the nucleic acid binding

portion and a modifying portion,

wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analogue, and wherein the modifying portion comprises a polypeptide or peptidomimetic which is capable of modulating covalent modification of nucleic acid or chromatin and wherein the nucleic acid binding portion is joined to the expression repressor portion, either directly or indirectly, by an intermediate linker or moiety.

41(currently amended). The method of claim 39 or 40 further comprising ~~the steps of~~:

(4) performing a quality control assessment on the molecule preparation in order to determine that the nucleic acid binding portion and repressor or modifying portion are attached to each other;

(5) testing the affinity and/or specificity of binding of the nucleic acid binding portion to the site and/or a polynucleotide having or comprising the nucleotide sequence of the site;

(6) testing the affinity and/or specificity of binding of the molecule to the site and/or a polynucleotide having or comprising the nucleotide sequence of the site; and/or

(7) testing the efficacy of the molecule or polynucleotide *in vitro* in modulating or suppressing the expression of the gene and/or of a reporter gene comprising the nucleotide sequence of the site.

42-43(canceled).